8. Some Observations on the Group Reports

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The next session of the conference involved a panel of observers whose purpose was to give their impressions of the breakout group reports, looking for unstated assumptions, clashes, and interactions among the various concepts presented, and addressing questions such as: Does a coherent picture emerge? Where are the conflicts? Compatibilities? Reinforcing trends? Counteracting trends?

The First Observer

The first observer noted that there are three pillars to IT: computers, communications, and content. The world uses these pillars, in various combinations, for three things: command, control, and commerce. Entertainment, socially and culturally derived, is one important component of the commerce application.

The various applications of IT can be treated as either private goods, which are left to the market, or as public goods. The U.S. tends to treat most applications of IT as private goods. Other nations (e.g., India) are treating IT not just as a private good, but also as a public good. They are not leaving it to the "market" to determine what happens regarding IT developments and applications.

As a result of these differences in approach, other nations may/will use IT in different ways than does the U.S. (See further discussion of this point in Section 6, above.)

The Second Observer

The second observer listed a number of topics related to the future course of the information revolution that were missing from or underrepresented in the conference discussions:

- Science fiction ideas regarding the future of the information revolution. He noted that in the past, science fiction writers have often done a better job of predicting the technological future than did the experts in various technology areas.

- The rich-poor gap, which as a result of the information revolution will exist between countries and within countries. (See section 7.)

- New ways of "measuring" software.

- New developments in the input/output coupling of information systems to humans.

- Differing regional impacts of IT, which he believes will be important. (See section 6.)

- The role of the entrepreneur, which he feels was underestimated in the conference discussions.

- The political marginalization of government, which he feels will be a very important issue in many nations. (See section 7.)

- Cultural changes brought about by the use of IT. In his words, kids today are different [than kids when he was a kid] as a result of their use of IT.

- Transformations in the ways of working in many areas (e.g., science) as a result of the use of IT. As one example of this, he mentioned the "cycle time" in the generation of successive versions of scientific papers, which used to be months and now is minutes to days. (See section 7.)

The Third Observer

The third observer highlighted the following additional topics as being important to the future course of IT and the information revolution:

- Bandwidth is a big issue. Bandwidth is fundamental. The bandwidth infrastructure is very important.

- Developments in display technology will be very important.

- Speech translation will be important.

- The bio revolution will be very important, in and of itself, and also in its coupling to IT.

- Microelectromechanical systems (MEMS), nanotechnology, and polymer electronics will be very important.

- Photonics will move very rapidly in the next five years.